

vania dated April 1, 1925, from your orator to the defendant dated April 1, 1925, from your orator to the Federal Power Commission dated April 1, 1925, from the Secretary of the Federal Power Commission to your orator dated April 4, 1925, and from the Philadelphia Electric Company to your orator dated April 7, 1925, are filed herewith marked respectively "Plaintiff's Exhibits 9, 10, 11, 12, 13, 14, 15, 16 and 17."

15. Since April 7, 1925, communications have been had, both orally and in writing, between representatives of your orator and the defendant. In the course of correspondence the Philadelphia Electric Company has stated an intention to construct a dam "with a permanent crest at [23596] (page 32) about elevation of 86 feet above mean sea level", with movable gates above, to which your orator replied that whether the crest of the dam consist of a permanent structure or movable gates, a crest elevation, permanent or temporary, of more than 100 feet would be an invasion of your orator's rights. Your orator repeatedly asked to be reassured that the defendant has no intention to erect *any* dam having a crest elevation—fixed or movable—of more than 100 feet. To your orator's last letter dated May 22, 1925, asking such reassurance no reply has been received. Copies of a letter from the Philadelphia Electric Company to your orator, dated May 1, 1925, your orator's reply, dated May 11, 1925, a letter from the Philadelphia Electric Company dated May 14, 1925, and your orator's reply, dated May 22, 1925, are filed herewith, marked respectively "Plaintiff's Exhibits Nos. 18, 19, 20 and 21". On June 26, 1925, at a hearing before the Public Service Commission of Pennsylvania, the Vice-President and Chief Engineer of the Philadelphia Electric Company testified that construction plans have been changed and that the defendant now intends to build its dam to a crest elevation, including movable gates, of 108½ feet, and to keep the water at "a fixed level of 108½ feet", with "a possibility" that is "very questionable" of coming down

"a very small amount" at times; that "the pond is now absolutely fixed at  $108\frac{1}{2}$ " and the dam is being built to carry it at the "full  $108\frac{1}{2}$ ". When so testifying the witness attempted to belittle the [23597] (page 33) extent, but did not pretend to deny the fact, of interference by such a dam, so operated, with your orator's water-power plant and the tailrace thereof. On the contrary the witness asserted that "the maximum interference" with your orator's plant "will be at about one hundred and two feet, but that don't necessarily mean that that is going to make us maintain the pond level at one hundred and two feet". Your orator, therefore, believes and avers as a fact that the defendant intends to erect in and across the Susquehanna River, near Conowingo in the State of Maryland, a dam having a crest elevation of  $108\frac{1}{2}$  feet above mean sea level.

16. Your orator's dam and power-plant, including the tailrace of said dam, originally cost and are now worth millions of dollars. The value of the tailrace of your orator's dam, the value of the land owned by your orator in fee simple on the left bank of the Susquehanna River between your orator's dam and the end of the tailrace thereof at the foot of Cully's Falls which would be permanently flooded and overflowed as hereinbefore set forth by the erection by the defendant of a dam having a crest elevation exceeding 100 feet above mean sea level, the value of the land owned by your orator on the left bank of the Susquehanna River below the foot of Cully's Falls which would without right be so flooded and overflowed by such a dam, and the value of the power that would be lost in each year by your orator as a [23598] (page 34) result of flowing back upon, encroaching upon and interfering with the tailrace of its dam by the erection of such a dam each exceeds the sum of three thousand dollars. Ever since the completion of its dam and the first unit of its power plant your orator has been, and now to a greater degree than ever is, continuously utilizing, through the sale of electric energy generated thereby, the water power available to

your orator by the use of its dam and power plant, including the tailrace of its dam, and in this way utilizing and enjoying the full value of its dam and power plant and also all the lands owned by your orator on the left bank of the Susquehanna River between your orator's dam and the end of the tailrace thereof at the foot of Cully's Falls and on the islands hereinbefore mentioned in the Susquehanna River, as well as lands owned by your orator on the left bank of the Susquehanna River below the foot of Cully's Falls. The erection by the defendant of a dam having a crest elevation exceeding 100 feet above mean sea level would therefore permanently deprive your orator of the full use of its dam and power plant and especially of the tailrace of its dam and also of the use and ownership of lands owned by your orator in fee simple and would thereby cause your orator great and irreparable loss, damage and injury.

TO THE END, THEREFORE:

1. That the defendant and its officers, [23599] (page 35) agents, servants, employees, contractors, subcontractors and lessees and all persons acting under their authority may be perpetually and also preliminarily pending this suit restrained and enjoined from constructing, erecting, maintaining or operating or beginning the construction or erection of a dam or dams in or across the Susquehanna River below your orator's dam and power plant having a crest elevation, fixed or movable, exceeding 100 feet above mean sea level or any other dam or dams which will flow back upon, encroach upon or interfere with the water-power plant of your orator and the tailrace thereof extending to the foot of Cully's Falls.

2. That the construction, erection, maintenance or operation by the defendant of any dam or dams, in or across the Susquehanna River below your orator's dam and power plant, having a crest elevation, fixed or movable, exceeding

100 feet above mean sea level or any dam or dams which will flow back upon, encroach upon or interfere with the water-power plant of your orator and the tailrace thereof extending to the foot of Cully's Falls may be finally adjudged and decreed to be an unlawful invasion of the lands and vested property rights of your orator as owner of its dam and power plant, including the tailrace of its dam, and all the lands on the left bank of the Susquehanna River between your orator's dam and the end of the tailrace thereof at the foot of Cully's Falls, as well as lands on said left bank [23600] (page 36) below the foot of Cully's Falls, and all the islands hereinbefore mentioned in the Susquehanna River and all the benefit of the conditions upon which lands and flowage rights below the foot of Cully's Falls were conveyed by the two deeds hereinbefore mentioned dated August 11, 1908.

3. And that your orator may have such other and further relief in the premises as its case may require.

MAY IT PLEASE YOUR HONOR to grant unto your orator the writ of subpoena directed to the defendant commanding it to be and appear in this Honorable Court on some certain day to be named therein and to answer the premises and to abide by and perform such order or decree as this Honorable Court may make in the premises.

AND as in duty bound your orator will ever pray.

KEECH, DEMING & CARMAN  
HAMAN, COOK, CHESTNUT & MARKELL  
Solicitors for the Plaintiff.



[23601] (page 37)

STATE OF NEW YORK: }  
COUNTY OF NEW YORK: } ss:

I HEREBY CERTIFY that on this 10th day of July 1925, before me, the subscriber, a Notary Public of the State of New York, in and for the County of New York aforesaid, personally appeared CHARLES E. F. CLARKE, and made oath in due form of law as follows:

"I am President of Pennsylvania Water and Power Company, a Pennsylvania corporation, plaintiff in the foregoing bill of complaint. I have read the foregoing bill of complaint. The matters and facts therein stated are true as so stated to the best of my knowledge, information and belief."

Charles E. F. Clarke

Subscribed and sworn to before me this 10th day of July, 1925.

As witness my hand and Notarial Seal.

Ernest B. Illmer  
Notary Public

(Notarial Seal)

Notary Public  
Richmond County  
New York County No. 23  
My Commission Expires  
March 30, 1927.

[23602]

**UNITED STATES OF AMERICA**  
**DISTRICT OF MARYLAND, To Wit:**

I, **CHARLES W. ZIMMERMAN**, Clerk of the District Court of the United States for the District of Maryland, do hereby certify that the foregoing is a true copy of the Bill of Complaint, which was entered and filed on the 11th day of July, 1925, in the therein entitled case of Pennsylvania Water & Power Company, a body corporate, vs. The Susquehanna Power Company, a body corporate, No. 913 Equity Docket in said District Court.

IN TESTIMONY WHEREOF, I hereunto set my hand  
and affix the seal of the said District Court  
this 3rd day of September, 1946.

(Seal)

**CHAS W. ZIMMERMANN**  
Clerk of the said District Court.

**EXHIBIT NO. 233.**

[23603]

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE  
DISTRICT OF MARYLAND

IN EQUITY.

PENNSYLVANIA WATER AND POWER CO.

VS

THE SUSQUEHANNA POWER COMPANY

TO THE HONORABLE, THE JUDGES OF THE UNITED STATES  
DISTRICT COURT FOR THE DISTRICT OF MARYLAND:

The Answer of the said Defendant, The Susquehanna Power Company, to the Bill of Complaint filed in said Court by the Pennsylvania Water and Power Company, respectfully shows:

I

(a) It denies that the Complainant is a corporation duly organized under the laws of Pennsylvania.

(b) The Complainant was not duly organized under the Act of April 27th, 1909, Pennsylvania Laws, page 175 (amending the Act of May 31st, 1887, which was a supplement to the Act of April 8th, 1861), in that William M. Barnum the purchaser of the property and rights of the said McCall Company did not comply with the provisions of said Act, and title to the said property and rights of the said McCall Company has never legally passed from him.

II

It denies the matters and things set up in paragraph two of said Bill in so far as the same refer to the ownership of said dam and the lawful development of electric current and power, and the transmission thereof to others,

as well as in reference to [23604] (page 2) the ownership of the part of the land therein mentioned, and

(a) Avers that said dam, lands and rights are held

“subject to the provisions of the decree of the Court of Common Pleas of Dauphin County, Pennsylvania, entered on the 14th of January, 1907, in a suit in equity of the Commonwealth of Pennsylvania against the McCall Ferry Power Company and others”

as will appear from said Complainant's Exhibit No. 2, and that the Commonwealth of Pennsylvania, by its Bill of Complaint in the aforesaid cause, prayed for an injunction against the construction and maintenance of said dam without adequate provision for the future navigation of the River Susquehanna by a canal from Columbia to Havre de Grace and for a declaration that certain consents and releases from the Susquehanna Canal and Power Company and from the Susquehanna and Tidewater Railroad Company to the said McCall Company, bearing dates respectively the 9th and 12th of June, 1905, be declared void, and that the mortgage from the said McCall Company to the Knickerbocker Trust Company, Trustee, be reformed; and thereafter a decree was passed in said cause whereby the construction of said dam was allowed to be continued, but subject to the conditions subsequently set out in said decree whereby, notwithstanding said dam, the navigable character of said River would be maintained and all questions as to the validity of the construction of said dam under the Acts of Assembly aforesaid were reserved; but, notwithstanding the said decree and the determination therein with reference to the navigable character and capacity of said River, the Complainant by its said dam has interfered with and now interferes with the navigable character thereof.

(b) That the Complainant has not complied with the laws of Pennsylvania, Act of June 14, 1923, Pennsylvania



Laws, page 704, and has not thereunder duly procured a limited power permit from the Water and Power Resources Board of said Commonwealth.

[23605] (page 3)

(c) That the Congress of the United States, by its Act of June 10th, 1920, (Volume 41 Stat. L. page 1063) referred to in said bill, has assumed jurisdiction over the development of hydro-electric power in and upon the navigable waters of the United States. That said Act of Congress is remedial and thereby inherently retroactive, and the Complainant was at the time of filing its Bill, and prior thereto, and is now subject to its terms and provisions and to supervision and regulation thereunder, and the Complainant has not procured from the Federal Power Commission created by said Act, the prerequisite permit and license for the maintenance of its said dam and project works on said river erected and operated as required by said Act of Congress and the regulations duly adopted by said Power Commission prior to 1920, and the Complainant has also made new construction at and in connection with its said dam and project works, without procuring from the said Commission the prerequisite permit and license therefor; and

Therefore, the Defendant says that the Complainant is without equity to maintain its said Bill of Complaint, because its said plant and project works are maintained and operated in violation of the laws of the State of Pennsylvania and in violation of the laws of the United States.

### III

The Defendant denies the matters set forth in the Third Paragraph of said Bill, and requires strict proof thereof.

### IV

Answering the Fourth Paragraph of said Bill, the Defendant admits that the Mortgage or Deed of Trust therein set forth was executed, delivered and recorded.

**V.**

The Respondent denies the averments of the Fifth Paragraph [23606] (page 4) of said Bill in manner and form as therein stated and shows that the said William M. Barnum, as the said purchaser, was alone constituted a body politic and corporate under the laws of Pennsylvania, and further denies that the Complainant was lawfully organized, and that it succeeded to the property and rights of the said McCall Company referred to in said paragraph.

**VI**

The Defendant admits the matters set forth in the Sixth Paragraph of said Bill.

And your Respondent avers in connection therewith as follows, that is to say:

(a) On the 27th day of January, 1923, it duly applied to the Federal Power Commission for a Preliminary Permit to construct its water plant development near Conowingo in Maryland, having a dam with a crest elevation not to exceed 110 feet above mean sea level. Due notice thereof was published as required by the Regulations under said Act of Congress of June 18th, 1920, thereby inviting objections to its said development at a public hearing. No objections were filed by said Complainant nor by any other person, and in August of 1923, your Respondent was duly granted its Permit and thereby acquired the priority of right under Federal Law, to utilize the River for its hydro-electric Project, and forthwith filed its application for a License as aforesaid under the terms stated in said Permit. The said Commission has not yet issued a License to your Respondent, and your Respondent cannot proceed with its proposed dam and project until said license is issued.

(b) And your Respondent having in all respects [23607] (page 5) complied with the Federal Law,

though its pending application for license has not yet been granted, and Complainant not having complied with said law, in any respect whatsoever cannot maintain its Bill in a Federal Court.

## VII

To the Seventh Paragraph of said Bill, the Defendant admits the delivery and recording of the two deeds therein mentioned, namely to the Sowego Company, a Pennsylvania corporation, and to the Susquehanna Company, then Susquehanna Power Company, a Maryland corporation respectively as set forth in Complainant's Exhibits Nos. 5 and 6, but hereby expressly denies that the conditions inserted in the deed to said Sowego Company (Exhibit No. 5), that is to say:

"the right to flow and flood water over, and acquire for water power purposes by the erection and operation of a dam or dams having a crest elevation of not exceeding 100 feet above mean sea level, so much of the following described parcel of land as lies below the foot of Cully's Falls, that is to say: That parcel in Martie Township conveyed by Amer Kline to Carey T. Hutchinson, dated the 28th of April, 1905, and recorded in Lancaster County Deed Book X, Volume 17, page 416, and a similar condition, set forth under Paragraph Eight (c) of said Bill in respect to the William Sweigart land."

and attempted to be created by the said deed to Sowego Company, have any application to the proposed development, dam and project works of this Respondent, and Respondent shows that its rights are fixed and determined by the deed from the McCall Ferry Power Company and others to the Susquehanna Power Company, predecessor in title to the Respondent, a copy of which is filed with the Bill of Complaint marked "Exhibit No. 6", and by said deed the Respondent is authorized and empowered,



"to construct, maintain and operate a dam or dams, water power plant or plants and appurtenances at any point or points upon the Susquehanna River [23608] (page 6) below the Pennsylvania and Maryland State line . . . upon condition that the Susquehanna Company shall not flow back upon, encroach upon or interfere with the water power plant of the McCall Company near McCall's Ferry, and the tail race thereof extending to the foot of Cully's Falls".

### **VIII**

The Respondent admits the releases of the lands described in the deeds mentioned in Paragraph Eight of said Bill of Complaint, but denies that the alleged limitations as to the height of the dam to be erected by the Respondent and referred to in said deed to said Sowego Company are in any manner binding upon this Respondent and limit its right to construct its dam, provided that it shall not flow back upon, encroach upon, or interfere with the water power plant of the McCall Company, and the tail race thereof extending to the foot of Cully's Falls as said Falls existed on February 20, 1908.

### **IX**

The Respondent denies that the enumeration of property and rights referred to in the Ninth Paragraph of said Bill is material to the issues in this case, and also denies that the deeds enumerated in said Paragraph are effective to convey the property and rights in said Paragraph mentioned, or that said deeds are material to the issues in this case.

### **X**

The Respondent denies that the inferences attempted to be drawn from facts set out in the Tenth Paragraph of said Bill are material to the issues in this case, or that the deeds therein mentioned from Brown and Barnum and others are effective to convey to the Complainant the property and rights therein mentioned.



## XI

The Respondent denies the matters and facts alleged [23609] (page 7) in the Eleventh Paragraph of said Bill in manner and form as therein alleged, and it shows and claims as set forth in Paragraph Seven of this Answer the right

“to construct, maintain and operate a dam or dams, water power plant or plants and appurtenances at any point or points upon the Susquehanna River below the Pennsylvania and Maryland State Line . . . upon condition that the Susquehanna Company shall not flow back upon; encroach upon or interfere with the water power plant of the McCall Company near McCall's Ferry, and the tail race thereof extending to the foot of Cully's Falls”.

The Respondent avers that the said tail race at the foot of Cully's Falls was in February 1908, and prior thereto, at elevation 103 feet above mean sea level, and the Respondent claims the right to back the water to the then foot of the said Falls as provided in said deed. The Respondent denies that a dam constructed at a crest elevation of 103 feet above mean sea level would interfere with the operation of the Complainant's plant and works as therein stated.

## XII

Answering the Twelfth Paragraph of said Bill, the Respondent asserts and claims that the agreement of February 20th, 1908, referred to in said Paragraph, was made and executed for the purpose of bringing about the consolidation therein set forth and explained, and for the purpose of avoiding further litigation, and that the deed of August 11th, 1908, from the McCall Company and others to Susquehanna Power Company was executed in pursuance of said agreement and in part consideration thereof. It denies that it has misconstrued said agreement and asserts that its terms are relevant and material to the con-

troversy in this case and that all claims of the Complainant to the contrary of and against said agreement are void and immaterial to the issue in this case, as by said agreement, an original of which is in possession of the Complainant, and a copy whereof should have been filed with the Bill of Complaint, will more fully appear. And Respondent files such copy as a part hereof marked "Respondent's Exhibit No. 1".

[23610] (page 8)

### **XIII**

Answering the Thirteenth Paragraph of said Bill, the Respondent denies that it has at any time entered into an agreement with the Complainant or made any statements as set forth in said Paragraph to the effect that it would abandon its right to erect a dam having a crest elevation of more than 100 feet. It admits the memorandum filed with the Public Service Commission of Maryland, but it denies the inferences in said Paragraph attempted to be drawn of an intention of Respondent to abandon in any way its right to back the water to the said foot of Cully's Falls, as it existed February 20, 1908.

### **XIV**

Answering the Fourteenth Paragraph of said Bill, the Respondent denies the inferences thereby attempted to be drawn from the papers therein referred to, and that it has any intention to abandon its right to back water to the foot of Cully's Falls as hereinbefore explained.

### **XV**

Answering the Fifteenth Paragraph of said Bill, the Respondent says that various conferences between the engineers of the Complainant and the engineers of the Defendant have been had beginning in or about the autumn of 1910 or the spring of 1911, for the purpose of determining the exact elevation at the foot of Cully's Falls, to which point it was always conceded your Respondent had the

right to back water. That in view of the controversy over the height above mean sea level at the foot of Cully's Falls and for the purpose of making it possible for the Respondent to secure all of the fall to which it was lawfully entitled, the Respondent determined that instead of erecting a solid concrete dam with a crest elevation of either 103 feet above mean sea level or 100 feet above mean sea level, it would erect a solid concrete dam with a crest elevation of 86 feet above mean sea level with superimposed movable gates to be so [23611] (page 9) constructed that they could be used to maintain the level of the water at all times at an elevation lawfully permissible to the Respondent.

The Respondent denies that the testimony offered by The Philadelphia Electric Company before the Public Service Commission of Pennsylvania on June 26, 1925, or at any other day, could be truthfully paraphrased as set forth in Paragraph 15 of the Bill of Complaint, and avers that the testimony of the Chief Engineer of The Philadelphia Electric Company and the other engineers there testifying for the applicants defined the revised plans for the construction of the said dam by the Respondent as herein set forth. The revised plans, according to the said testimony and as herein asserted, provide as follows:

"The design of the Conowingo Development in detail and as a whole, is representative of conservative practice and is based on the use of the most modern and efficient hydro-electric equipment which can be furnished by reliable manufacturers.

The dam, of the gravity type, will be of mass concrete, founded on sound solid granite and the spillway section will be equipped with 50 crest gates of the Stoney type to regulate the headwater levels so as to result in non-interference with the water levels at the foot of Cully's Falls just below the Holtwood Development and limit the maximum high water level to Elev. 108.5.



Five traveling gate hoists of ample capacity and good design will be provided to insure reliable and safe operation of the crest gates under all conditions of ice and river flow. Only about half the crest gates will be required to divert the maximum flood of an average year, and about 70% of the time none of these gates will be operated as all the river flow will be required for power generation. The three smaller regulating gates equipped with individual motor operated gate hoists controlled from the power station, will be of adequate capacity to permit accurate regulation of the pond level. The crest gates will be designed to insure water tightness and an emergency gate will be provided to be lowered in front of the crest gates when required for maintenance of the gates."

The Respondent expressly denies the averment in the last sentence of paragraph 15 of said Bill of Complaint, that the Defendant intends to erect in and across the Susquehanna River near Conowingo in the State of Maryland, a dam having a crest elevation of 108.5 feet above mean sea level, if such averment is [23612] (page 10) intended to assert that the dam when erected will have a permanent elevation of 108.5 feet above mean sea level, because, as heretofore stated, the dam when erected according to the aforesaid revised plans, will have a permanent crest elevation of only 86 feet with gates as above set forth, capable of increasing from time to time the elevation of water to an elevation lawfully maintainable by this Respondent.

## XVI

Answering the Sixteenth Paragraph of said Bill, the Respondent denies the averments as therein stated and denies that the end of the tail race of the Complainant at the foot of Cully's Falls, as it existed on February 20, 1908, would be flooded and overflowed, as in said Paragraph set forth, by the erection of a dam having a crest elevation of 103 feet above mean sea level.



## XVII

Further answering the allegations of said Bill, your Respondent shows that the said agreement of February 20th, 1908, was known and understood by the Complainant at the time of its alleged purchase of the interest of the McCall Company, and that purchase was made subject to said agreement, and at the time said agreement was made and after said deed was executed, it was ratified and approved by the McCall Company and also by the Knickerbocker Company, Trustee, under the mortgage referred to.

Respondent further shows and avers that after the execution of said agreement of February 20th, 1908, and after the execution of said deed of August 11th, 1908, from the McCall Company and others to this Respondent, the said McCall Company without the knowledge or consent of Respondent excavated its tail race at Cully's Falls and thereby removed and obliterated the said land mark and reduced the elevation corresponding to the foot of said Falls above mean sea level as the Falls existed on February 20th, 1908, and changed the boundaries of the rights and properties conveyed by [23613] (page 11) the aforesaid deed.

## XVIII

Answering generally the said Bill of Complaint, Respondent shows that the facts therein set forth do not make and constitute irreparable injury to the Complainant and therefore the Complainant is without equity to maintain its said Bill.

## XIX

Further answering said Bill of Complaint, this Respondent shows that in view of the present status of the Complainant under the laws of the States of Maryland and Pennsylvania and under the Act of Congress aforesaid, and in view also of the status of this Respondent with reference to the permits and licenses required under said

laws, the said Bill of Complaint was prematurely filed and should be dismissed.

Wherefore Respondent prays that the Complainant's Bill may be dismissed with costs.

**THE SUSQUEHANNA POWER COMPANY**  
by **George Bullock**  
**President**

**S. A. and Fred. R. Williams**  
**Willis & Hudgins**  
**Venable, Baetjer & Howard**  
**Solicitors for Respondent**

[23614]

PENNSYLVANIA WATER AND POWER  
Co.

vs

THE SUSQUEHANNA POWER  
COMPANYIN THE DISTRICT COURT  
OF THE UNITED STATES  
FOR THE DISTRICT OF  
MARYLAND

IN EQUITY

STATE OF NEW YORK, }  
COUNTY OF NEW YORK, } ss.:

I HEREBY CERTIFY that on this 14th day of September 1925, before me, the subscriber, a Notary Public of the State of New York, in and for the County of New York aforesaid, personally appeared GEORGE BULLOCK, and made oath in due form of law as follows:

"I am President of The Susquehanna Power Company, a corporation of the State of Maryland, Respondent in the above entitled cause. I have read the foregoing Answer. The matters and facts therein stated are true as so stated, to the best of my knowledge, information and belief".

GEORGE BULLOCK

Subscribed and sworn to before  
me this 14th day of September,  
1925

L. Otten

Notary Public

(SEAL)

[23615]

UNITED STATES OF AMERICA

DISTRICT OF MARYLAND, TO WIT:

I, CHARLES W. ZIMMERMANN, Clerk of the District Court of the United States for the District of Maryland, do hereby certify that the foregoing is a true copy of the Answer, which was entered and filed on the 15th day of September, 1925, in the therein entitled case of Pennsylvania Water and Power Company vs The Susquehanna Power Company, No. 913 Equity Docket in said District Court.

IN TESTIMONY WHEREOF, I hereunto set my hand and affix the seal of the said District Court this 3rd day of September, 1946.

(Seal)

CHAS. W. ZIMMERMANN

Clerk of the said District Court



**EXHIBIT NO. 234.**

[23616]

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND.

PENNSYLVANIA WATER & POWER COM-  
PANY, a body corporate,

vs.

THE SUSQUEHANNA POWER COMPANY,  
a body corporate.

IN EQUITY

TO THE HONORABLE, THE JUDGE OF THE UNITED STATES DIS-  
TRICT COURT FOR THE DISTRICT OF MARYLAND:

The petition of the plaintiff and the defendant respect-  
fully shows:

1. That the plaintiff on the one part, and the defend-  
ant and certain corporations associated with it on the other  
part, have entered into a certain agreement dated February  
20, 1926, a copy of which, marked "Exhibit Agreement",  
is filed herewith and to which reference is hereby made for  
a statement of all the terms and provisions thereof. By  
said agreement it is, among other things, agreed without  
prejudice to any of the opposing contentions of the plain-  
tiff and the defendant [23617] in this case, or to any of  
their existing legal rights, that the plaintiff consents to the  
maintenance and operation by the defendant and its asso-  
ciated corporations of a certain dam and gates in a certain  
manner so as to flood and overflow land of the Plaintiff,  
this consent however being expressly conditioned upon per-  
formance of certain provisions, covenants and conditions  
contained in said agreement. Said agreement is to con-  
tinue in force for a term of fifty years and to be renewable

from time to time forever at the option of the defendant and its associated corporations.

2. Said agreement, by its terms, is subject to the approval of the Public Service Commission of Pennsylvania, so far as required by law, and is to become effective when so approved by said Commission. Said agreement has been so approved by said Commission by a certain report and order and certificate of public convenience, both dated November 22, 1926, a certified copy of which is filed herewith marked "Exhibit Pennsylvania Public Service Commission".

3. By said agreement it is provided that a copy of said agreement shall be filed in this case, and [23618] the plaintiff and the defendant shall unite in asking an order staying further proceedings in this case but retaining jurisdiction in the premises, without prejudice.

WHEREFORE, your petitioners, the plaintiff and the defendant herein, hereby unite in praying the passage of an order staying further proceedings in this cause but retaining jurisdiction in the premises, without prejudice.

And as in duty bound, your petitioners will ever pray.

KEECH, DEMING & CARMAN

HAMAN, COOK, CHESTNUT & MARKELL

Solicitors for the Plaintiff

VENABLE, BAETJER & HOWARD

Solicitors for the Defendant

[23619]

STATE OF MARYLAND, }  
CITY OF BALTIMORE } ss.:

I HEREBY CERTIFY that on this 27th day of December, 1926, before me, the subscriber, a notary public of the State of Maryland, in and for the City of Baltimore aforesaid, personally appeared J. A. Walls, Vice President of Pennsylvania Water and Power Company, Plaintiff, one of the petitioners in the foregoing petition, and made oath in due form of law that the matters and facts stated in the foregoing petition are true as so stated to the best of his knowledge, information and belief.

As WITNESS my hand and notarial seal.

ANNA TEICHMAN

Notary Public

My Commission expires May 2, 1927

**[23620]**

**STATE OF PENNSYLVANIA,**  
**COUNTY OF PHILADELPHIA,** } ss.:

I HEREBY CERTIFY that on this 30th day of December, 1926, before me, the subscriber, a notary public of the State of Pennsylvania, in and for the City of Philadelphia aforesaid, personally appeared W. H. Johnson, President of the Susquehanna Power Company, defendant, one of the petitioners in the foregoing petition, and made oath in due form of law that the matters and facts stated in the foregoing petition are true as so stated to the best of his knowledge, information and belief.

As WITNESS my hand and notarial seal.

J. FLORENCE SMITH

Notary Public  
(Notarial Seal)

Commission expires April 1, 1927



[23621]

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND

PENNSYLVANIA WATER & POWER COM-  
PANY, a body corporate,

vs.

SUSQUEHANNA POWER COMPANY,  
a body corporate.

IN EQUITY

Upon the petition, with exhibits and affidavits, of the plaintiff and the defendant in the above entitled cause, it is this 4th day of January, 1927, by the United States District Court for the District of Maryland in equity ORDERED that further proceedings in said cause are hereby stayed but jurisdiction in the premises is hereby retained, without prejudice.

MORRIS A. SOPER

District Judge

UNITED STATES OF AMERICA  
DISTRICT OF MARYLAND, TO WIT:

I, CHARLES W. ZIMMERMAN, Clerk of the District Court of the United States for the District of Maryland, do hereby certify that the foregoing is a true copy [23622] of the Petition of the Plaintiff and the Defendant and Order thereon staying further proceedings which was entered and filed on the 4th day of January, 1927 in the case of PENNSYLVANIA WATER & POWER COMPANY, a body corporate vs. SUSQUEHANNA POWER COMPANY, a body corporate No. 913 Equity in said District Court.

IN TESTIMONY WHEREOF, I hereunto set my hand  
and affix the seal of the said District Court,  
(Seal) : this 3rd day of September, 1946.

CHAS. W. ZIMMERMAN,

Clerk of the Said District Court

**EXHIBIT NO. 235.**

[23624]

**AGREEMENT** made as of the 20th day of February, 1926, between Pennsylvania Water & Power Company, a Pennsylvania corporation, hereinafter called "Holtwood Company", party of the first part, and The Susquehanna Power Company and The Susquehanna Electric Company, both Maryland corporations, and Philadelphia Electric Power Company, a Pennsylvania corporation, hereinafter sometimes called "Conowingo Companies", parties of the second part.

Each, any and/or all of the parties of the second part are hereinafter referred to jointly and severally as "Conowingo Companies", which term designates the singular as well as the plural number.

Holtwood Company owns and operates a hydro-electric plant on the Susquehanna River at Holtwood, Pennsylvania, the tailrace thereof extending downstream to the foot of Cully's Falls, and in connection with said plant owns certain lands on the Susquehanna River above the foot of Cully's Falls and, subject to limited flowage rights, below the foot of Cully's Falls. Conowingo Companies own certain lands and flowage rights on the Susquehanna River in Maryland and Pennsylvania extending upstream to the foot of Cully's Falls, and one of said Conowingo Companies, to wit, Philadelphia Electric Power Company, claims to own lands and islands above the foot of Cully's Falls, and together said Conowingo Companies propose to construct and operate a hydro-electric plant, known as the Conowingo Development, on said river, near Conowingo, Maryland.

In the interest of overall economy and conservation of natural resources it is desirable to utilize to the maximum the head of water between Holtwood Company's forebay and Conowingo Companies' tailrace. By tailrace improvements or additions Holtwood Company claims that it could

largely utilize the present head of water between Holtwood Company's tailbay and the foot of Cully's Falls. Careful studies by both Holtwood Company and Conowingo Companies, however, have shown that the total head between Holtwood Company's forebay and Conowingo Companies' tailrace can be most economically developed by Conowingo Companies maintaining the Conowingo pond elevation at not to exceed 108.5 feet above mean sea level, thereby backing water into Holtwood Company's tailrace with consequent gain to Conowingo Companies and loss to Holtwood Company. Holtwood Company estimates that its average annual loss in energy output and demand value, with its existing power house and generating units and its tailrace in its present condition, will be seventy-two thousand dollars (\$72,000), and there will also be other losses which have not been evaluated. Conowingo Companies estimate that their average annual gain in energy output alone from the operation of seven units of their plant will be one hundred and ninety-five thousand five hundred dollars (\$195,500).

Holtwood Company contends that Conowingo Companies without the consent of Holtwood Company have no right either (a) to back water or raise the water level under any condition of flow in the Susquehanna River at the foot of Cully's Falls, or (b) to build a dam, whether fixed or movable, with an elevation exceeding one hundred feet above mean sea level, and (c) that the foot of Cully's Falls is a line across the Susquehanna River located as shown, (designated AB), on the map, marked Exhibit No. 1, attached to and made a part hereof and that this line approximately passes through the point at which was located the "No. 5 Gauge" or "Cully's Falls Gauge" of McCall Ferry Power Company. Conowingo Companies dispute Holtwood Company's contention and contend (a) that, without the consent of Holtwood Company, they have the right to build any dam with or without gates which will not back water upon the tailrace of Holtwood Company at the foot of Cully's Falls and (b) Conowingo Companies

agree with Holtwood Company that the foot of Cully's Falls is a line across the Susquehanna River located as shown by said [23625] line AB on said map, Exhibit No. 1, except as to that part or portions of said line AB which lie between any two successive intersections of the one hundred three feet elevation contour line on the bed of said Susquehanna River when said contour line crosses said line AB and continues upstream and back again to intersect said line AB, which said part or portions of said line AB Conowingo Companies contend do not truly or correctly designate the foot of Cully's Falls, and Conowingo Companies contend that between each of said two successive points of intersection ~~along the~~ line AB the true location of said foot of Cully's Falls is a line which leaves said line AB and continuously follows the meanders, windings and turnings of said one hundred three feet elevation contour line upstream, across-stream and downstream until it again intersects said line AB, and (c) Conowingo Companies contend that Holtwood Company is without right to maintain its tailrace to the foot of Cully's Falls for the reason that by so doing it is unlawfully diverting, changing and diminishing the natural and normal flow of the said Susquehanna River from and with respect to the lands and islands above the foot of Cully's Falls owned by one of said Conowingo Companies, to wit, Philadelphia Electric Power Company. Other opposing contentions of Holtwood Company and Conowingo Companies are stated or referred to in the bill and answer in a case brought by Pennsylvania Water & Power Company against The Susquehanna Power Company and now pending in the United States District Court for the District of Maryland in equity, which case is designated in said Court as Serial No. 913 Equity and is referred to in Equity Docket No. 10 Folio 13 etc.

Holtwood Company and Conowingo Companies, without prejudice to any of their opposing contentions hereinbefore or in the aforesaid equity case stated or referred to, or to any of their existing legal rights, have reached an



agreement upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, THIS AGREEMENT WITNESSETH that in consideration of the premises and of the mutual covenants, agreements and conditions herein contained and of the sum of one dollar (\$1) by each party or parties to the other party or parties in hand paid, receipt whereof is hereby acknowledged, the parties hereto do hereby covenant and agree, each for itself, its successors and assigns, with the others, their successors and assigns, Conowingo Companies covenanting jointly and severally, as follows:

1. All elevations mentioned herein are expressed in feet above mean sea level. Mean sea level is agreed to be 187.754 feet below the benchmark of the United States Geological Survey referred to on page 41 of Bulletin 515 of the United States Geological Survey and there described as "McCall Ferry, 400 feet west of station, highway bridge over Kelley's Run, west abutment, north side, top of parapet wall; aluminum tablet stamped '188'", this being the datum for the gauge heights used in the engineering studies leading up to this agreement.

2. Conowingo pond elevation or pond level means the elevation of the water surface of the pond above Conowingo Companies' dam at a point on the west shore of said pond approximately one thousand feet up-stream from the face of the dam. Conowingo Companies shall install and maintain on the west shore of said pond in the vicinity of said point a pond level recording gauge of a type and in a location satisfactory to both parties so that the gauge will accurately record the above defined Conowingo pond elevation. Conowingo Companies shall furnish Holtwood Company the gauge records of the pond elevations. Holtwood Company shall have the right to inspect such gauge and, jointly with Conowingo Companies, to check the accuracy of the gauge. Conowingo Companies shall also install and maintain all necessary instruments and shall keep the

necessary records, subject to inspection by Holtwood Company, so that all computations required under paragraph 7 hereof may be accurately made.

3. Holtwood Company hereby consents to the building by Conowingo Companies of a dam at any point on the Susquehanna River below Holtwood Company's property with permanent spillway crest at an elevation not exceeding one hundred feet, surmounted by a movable dam or gates capable of maintaining the Conowingo pond elevation at not exceeding 108.5 feet in any event, but [23626] Holtwood Company does not consent that such dam shall or may be maintained or operated except upon the express conditions hereinafter set forth.

4. Holtwood Company hereby consents to the maintenance and operation by Conowingo Companies of said dam and the movable gates thereon so as to maintain the Conowingo pond elevation at not exceeding 108.5 feet, and thereby to flood and overflow land of Holtwood Company. This consent of Holtwood Company, however, is expressly conditioned upon performance by Conowingo Companies, their respective successors and assigns, of all the provisions, covenants and conditions as to payments or otherwise contained in the succeeding paragraphs hereof numbered 6 to 9, both inclusive. Immediately upon default by Conowingo Companies, their respective successors or assigns, in the performance of any of the provisions, covenants and conditions in said paragraphs contained and the continuance of such default for thirty days after written notice from Holtwood Company, its successors or assigns, all consent granted hereunder so to maintain and operate said dam and gates or to flood and overflow Holtwood Company's land shall *ipso facto* be withdrawn, and thereafter Conowingo Companies, their respective successors and assigns, shall have no right whatever to maintain or operate said dam and gates except those rights which Conowingo Companies or any of them would now have if this agreement

had not been executed, as hereinafter in paragraph 5 hereof expressly provided, unless and until any and all such defaults shall be cured by performance of all the provisions, covenants and conditions in said paragraphs 6 to 9 contained, including payment of all sums in default, with interest, and payment of all damages sustained by Holtwood Company, its successors and assigns, by reason of any such default. If and when any and all such defaults shall be so cured, then the consent granted hereunder to maintain and operate said dam and gates and the consent to flood and overflow Holtwood Company's land pursuant to this paragraph 4 shall revive, subject, however, to all the same conditions herein stated. All the provisions, covenants and agreements in this paragraph 4 contained or referred to, including all those contained in paragraphs 6 to 9, both inclusive, are and shall be covenants running with the land, and as such shall bind and inure to the benefit of all present and future owners of any interest in Conowingo Companies' dam or plant, and shall bind and inure to the benefit of all present and future owners of any interest in Holtwood Company's plant or lands.

5. Immediately upon any suspension or termination, by breach of condition, of the consent to maintain and operate said dam and gates pursuant to paragraph 4 hereof or upon the expiration or any other termination of this agreement, Conowingo Companies, their respective successors and assigns, shall have no right, without the consent of Holtwood Company, its successors and assigns, to maintain or operate said dam or gates except such rights (whether admitted or disputed by Holtwood Company) as Conowingo Companies now possess, in law and in fact, independently of any provision of this agreement, and thereupon Holtwood Company, its successors and assigns, shall have all the same rights (whether admitted or disputed by Conowingo Companies) and all the same remedies against Conowingo Companies, their respective successors and assigns, which it would now have if this agreement had never

been executed and said dam and gates had never been built, including the same right, if any, to prevent the continued maintenance and compel the removal of said dam or gates or any part thereof as Holtwood Company would now have in law or in fact to prevent the building of such dam or gates or any part thereof. No breach of condition or consequent suspension or termination of rights under paragraph 4 hereof on the part of Conowingo Companies, their respective successors or assigns, shall release Conowingo Companies, their respective successors or assigns, from the obligation to make any of the payments hereinafter provided for, but all such payments shall be made regardless of any such suspension or termination of rights.

6. In payment for and as an express condition of the consents and privileges granted to Conowingo Companies under this agreement, Conowingo Companies shall pay Holtwood Company the following amounts, to be computed and paid from and after the first day when the Conowingo Development starts operation by the generation of electricity for transmission:

(a) As compensation for Holtwood Company's loss in energy output and demand value of its plant, seventy-two thousand dollars (\$72,000) per annum.

[23627]

(b) As Holtwood Company's participation in Conowingo Companies' gain, as compensation for other losses by Holtwood Company, the following amounts per annum for the following years, *i. e.*, full years of twelve months each, whether calendar years or not, respectively, viz:

For the first year,	\$15,000.
For the second year,	\$40,000.
For the third year,	\$55,000.
For the fourth year,	\$60,000.
For each year thereafter,	\$61,750.



The aggregate of the sums mentioned as payments per annum in (a) and (b) shall be the only amount payable hereunder by Conowingo Companies in any one year, excepting, however, such additional payments as may become due for the reason and to the extent provided in paragraph 7 of this Agreement.

All payments hereunder shall be made in equal quarterly instalments on or before the fifteenth day of January, April, July and October for the preceding quarter ending on the last day of December, March, June and September respectively, or in case of the first payment in an instalment proportionate to the portion of the preceding quarter from and after the beginning from which payments are computed. Conowingo Companies shall not raise the Conowingo pond elevation above 100 feet before starting the operation of the Conowingo Development by the generation of electricity for transmission.

(c) In the event that on account of diversion of water from the Susquehanna River for Federal, State or municipal purposes the gross Conowingo gain obtainable from seven or more units operating under this agreement in an average flow year, computed in the same manner as the amount one hundred ninety-five thousand, five hundred dollars (\$195,500) mentioned among the recitals hereof (viz., 94,000,000 kilowatt-hours at 2.08 mills per kilowatt-hour), becomes less than one hundred ninety-five thousand, five hundred dollars (\$195,500), and that full compensation is not otherwise received by Conowingo Companies for such diversion, then the payments provided in (a) and (b) shall be decreased as follows:

Let "R" represent the ratio of the gross gain, (as decreased by diversion but corrected for partial compensation, if any), to one hundred ninety-five thousand, five hundred dollars (\$195,500). If the diversion is made above the Holtwood dam, then the payments for (a) Holtwood loss and (b) Conowingo gain shall both be reduced by the

factor "R". If the diversion is made below the Holtwood dam, then the payment for (a) Holtwood loss shall not be changed, but payment for (b) Conowingo gain shall become

$$R \times \$195,500 - \$72,000$$

---

## 2

7. In addition to the aforementioned payments, if for any reason the Conowingo pond elevation exceeds 108.5 feet for an aggregate of more than two hours in any one day or reaches 109 feet at any time during any day, Conowingo Companies shall pay Holtwood Company a sum equal to the product of eight mills and the number of kilowatt hours, computed hour by hour for the duration of the excess pond elevation as the product of the actual Conowingo power house discharge during the hour, in c.f.s./ hours, the average excess pond elevation above 108.5 feet during the hour and the factor 0.072 (corresponding to 85% efficiency). Nothing herein contained, however, shall give Conowingo Companies any right to allow the Conowingo pond elevation to exceed 108.5 feet. All payments under this paragraph 7 shall be made at the same time as payments under paragraph 6, viz., on or before the fifteenth day of January, April, July and October respectively for the preceding quarter.

[23628]

8. When, and only so long as, any excess of the Conowingo pond elevation above 108.5 feet is due solely to acts of God or of the enemy or unavoidable accident, without negligence on the part of Conowingo Companies, and in spite of all reasonable precautions taken by Conowingo Companies to prevent or abate such excess, then and to that extent, but in no other event whatever, Conowingo Companies shall be excused from making payments required under paragraph 7 hereof, except such part, if any,

of such required payments as may represent actual gain to Conowingo Companies from such unavoidable excess.

9. This agreement and all its provisions, covenants and conditions shall continue in force for a term of fifty years from and after its date, but Conowingo Companies, their respective successors or assigns, shall have the right at any time, not later than one year prior to the expiration of said term, by notice in writing to Holtwood Company, its successors or assigns, to renew this agreement and all its provisions, covenants and conditions for another term of fifty years, to commence on the expiration of the original term, and to be subject to the same provisions, covenants and conditions as this agreement, so that this agreement may thus be renewable from time to time forever. Upon the expiration of this agreement at the end of the original term without renewal or of any renewal term without further renewal, all consent granted to Conowingo Companies under paragraph 4 hereof shall be withdrawn and all liability of Conowingo Companies to make, and all right of Holtwood Company to receive, payments under paragraph 6 hereof shall cease, and thereafter the rights and liabilities of the parties hereto shall be governed by the provisions of paragraph 5 hereof.

10. Any dispute between the parties hereto as to their respective rights hereunder shall be settled by arbitration as follows: Each party shall appoint one arbitrator and a third arbitrator shall be selected by the two so appointed. In case of the failure of either party to appoint an arbitrator within thirty days after request by the other party or in case of the failure of the two arbitrators first appointed to agree within thirty days upon the selection of a third arbitrator, in either event an arbitrator shall be named by the person who is then the Chief Judge of the Supreme Bench of Baltimore City. The decision in writing of any two of said arbitrators shall be final and binding upon the parties hereto.

11. A copy of this agreement shall be filed in the aforesaid equity case in the United States District Court for the District of Maryland and Pennsylvania Water & Power Company and The Susquehanna Power Company shall unite in asking an order staying further proceedings in said case but retaining jurisdiction in the premises, without prejudice.

12. This agreement is subject to the approval of the Public Service Commission of Pennsylvania, so far as required by law, and shall become effective only when so approved by said commission. This agreement is also conditioned upon the right of Conowingo Companies to include the payments herein provided for as part of the operating costs of the Conowingo Project and upon the approval, before or after the beginning of said payments, of said payments as such operating costs, by any governmental regulatory body, if and only so far as such body may lawfully have jurisdiction and such approval may be required by law.

Pennsylvania Water & Power Company does hereby constitute and appoint *Ralph L. Thomas* to be its attorney for it and in its name and as and for its corporate act and deed to acknowledge this instrument before any officer authorized by law to take such acknowledgment, and The Susquehanna Power Company, The Susquehanna Electric Company and Philadelphia Electric Power Company do each hereby constitute and appoint *W. H. Johnson* to be its attorney for it and in its name and as and for its corporate act and deed to acknowledge this instrument before any officer authorized by law to take such acknowledgment.

IN TESTIMONY WHEREOF Pennsylvania Water & Power Company, The Susquehanna Power Company, The Susquehanna Electric Company and Philadelphia Electric Power Company have each caused these presents to be signed in its corporate name by its President or a [23629] Vice-President, and its corporate seal to be hereunto affixed,



duly attested by its Secretary or an Assistant Secretary,  
all in duplicate as of the day and year first above written.

## PENNSYLVANIA WATER &amp; POWER COMPANY.

By *J. A. Walls*,  
Vice-President.  
[SEAL]

ATTEST:

*F. J. Allen*,  
Secretary.

Signed, sealed and delivered in the presence of:

*R. L. Bortner*,  
*Chas. Markell*.

## THE SUSQUEHANNA POWER COMPANY.

By *W. H. Johnson*,  
President.  
[SEAL]

ATTEST:

*Jos. B. McCall, Jr.*,  
Secretary.

Signed, sealed and delivered in the presence of:

*Edw. H. Braun*,  
*J. Florence Smith*.

## THE SUSQUEHANNA ELECTRIC COMPANY.

By *W. H. Johnson*,  
President.  
[SEAL]

ATTEST:

*A. V. R. Coe*,  
Secretary.

Signed, sealed and delivered in the presence of:

*G. A. Albany*,  
*Edw. J. Lang*.

PHILADELPHIA ELECTRIC POWER COMPANY.

By *W. H. Johnson,*  
President.

[SEAL]

ATTEST:

*Jos. B. McCall, Jr.,*  
Secretary.

Signed, sealed and delivered in the presence of:

*Edw. H. Braun,*  
*J. Florence Smith.*

## EXHIBIT NO. 237.

[23635]

May 16, 1945

*In Re: Duties of Engineers (Flowage Basin)  
1911-1925, incl.*

Between the date of commercial operation of the Holtwood plant and the year 1925 there were charged to the 338 account, from time to time, amounts paid as salary or expenses to engineers. The apportionments of monthly salaries represent a distribution of the employees' time as determined by department supervisors.

It is known from reference to our engineering field notebooks, drawing files, the history of flashboard suits, and the recollections of a member of the Engineering Department whose employment started in 1916, that charges to the 338 account prior to the beginning of the job order system were for three principal types of work. These were river observations for the collecting of original basic data regarding flow characteristics, rates of run-off under varying rainfall conditions, etc.; backwater observations and surveys required for the defense of lawsuits, and property surveys required for information prior to purchase of property and for marking property boundaries after acquisition.

River observations refer to the establishment of river sections, involving surveys to locate the section and soundings to determine the cross-section of the river; to the development of rating curves and water surface profiles by observation and computation to show relationship between elevation and flow, to observations required to determine the effect of ice conditions upon flow and backwater; to the time in which rainfall in the upper part of the drainage area would affect river flow at Holtwood. The plant at Holtwood was the first major development on the river and there was no available source of information for the basic data required other than the meager and incomplete records com-

piled prior to 1910. It is to be noted also that observations and records were needed over the whole drainage area of the Susquehanna and its tributaries, so that this development work was not limited to the area of the Holtwood pond. The expense of any recurrent readings or reports on gauges or river flow was charged as an operating expense.

To support a bill for injunction or a suit for damages, the plaintiff must make allegations as to flooding. In filing an Answer in such a suit the defendant must admit, deny, or demand proof of such allegations, therefore, in each of our flashboard cases specific information as to backwater elevations was required. The elevation of water surface could be determined within reasonable limits without field work if complete basic information were available, but in the case of lawsuits, theoretical computations do not have as much weight as actual field observations. In addition to field checks of the height of water at certain points under certain flow and dam crest conditions, it was necessary to determine the area of land affected by making a topographic survey and a boundary survey. In nearly every case of an equity suit or an action in trespass for flooding, we ultimately acquired the property involved so that the cost of this engineering work constituted a part of our acquisition expense.

o In many other instances where property was acquired by negotiation not resulting from litigation, it was necessary to supply Mr. Bushong with information as to boundaries, topography, areas involved below certain contours, and other pertinent data. Many of our flowage releases are limited to certain specified areas or to certain specified elevations, and these limits had to be surveyed and marked for the benefit of both our agent and the property owner. Also, in the case of each property purchased in fee simple, permanent corner markers had to be set, signs had to be posted, and record drawings made up.



[23636] (page 2)

It is not the intention to indicate that the charges made to the 338 account in the past were solely for work in connection with river observations, backwater observations, and land surveys, as there may have been other types of investigation or development work performed. Bench marks had to be established for reference to elevations; triangulation networks set up for geographical location, the relationship between true and magnetic bearings had to be determined, and very often the engineer had to consult deed records for information as to the boundary lines of property abutting the property being surveyed. It is always advisable to make a plot of deed descriptions before starting a boundary survey, and in the case of a small, poorly defined property, such preliminary work may well be more expensive than the field survey.

The best information as to activities of field and office engineers whose salaries are charged in full or in part to the 338 account may be obtained from field notebooks filed at Holtwood, and the drawing file in Baltimore. Schedule "A" attached hereto is a summary of the field notebooks. Schedule "B," also attached is a list of drawings referring to the subjects discussed herein, and in most cases the title of the drawing is self-explanatory and requires no further comment. It should be noted that Schedules "A" and "B" are not based upon exhaustive studies, but if used in conjunction with the descriptions on expense accounts charged originally to 338-6E, are believed to be sufficient to show the nature of work involved.

[23637]

## SCHEDULE "A"

**Engineering Field Work in the Holtwood Flowage Basin  
During the Period 1911-1925, as Evidenced by Data  
Contained in the Field Notebooks.**

The following references to engineering field notebook entries were taken from the card index kept with the notebooks in the Holtwood Office. The cards are arranged alphabetically according to location, type of work, etc., and therefore may contain some repetitions in subject matter due to cross-indexing. There is no indication as to where the expense attached to these items was charged, but the work covered is connected with the matters discussed in the preceding memorandum.

*Bench Marks*

*Note:* Refers to establishment of permanent reference points.

1916	Along Conestoga Creek
1921	Section 15G to Section 1
1924	Vicinity of Safe Harbor
1924	Safe Harbor to Star Rock
1924	Columbia
1924	Safe Harbor to York County
1924	Star Rock to Creswell
1924	Star Rock to Turkey Hill
1924	Levels, McCalls Ferry to Holtwood
1924	Levels, Safe Harbor to Holtwood
1924	Levels, Vicinity of Holtwood
1924	Pequea (new)
1924	Sections Nos. 2 and 3
1924	Cully's Arch
1924	Minqua
1924	Levels, Mud Run
1913	Canal Survey—Wrightsville
1920	Columbia, High Water Observations

*Conestoga Creek*

1915	Water Surface Readings
1916	High Water Observations
1920	High Water Observations
1920-21	Ice Observations
1921	High Water Observations
1922-24	Ice Observations

*Cross Sections*

1913	Pequea Creek Section
1913	Wrightsville Canal Section
1914	Railroad, Holtwood to Pequea
1920	Railroad at Shenks Ferry
1921	Railroad at Pequea
1921	Railroad, Pequea to Shenks Ferry
1921	Railroad, Safe Harbor
1924	Railroad, Holtwood to Columbia

[23638] (page 2)

1913	Current Meter Readings, Section Nos. 4 to 9
1914	Current Meter Readings, Pequea Creek
1920	Current Meter Readings, Forebay

*Gauging of River*

*Note:* This classification refers to establishment and rating of river gauging stations.

1916	Columbia—Levels to Gauge
1916	Columbia—Water Surface Readings
1916	Section 42/2—Levels to Gauge
1916	Section 42/2—Water Surface Readings
1924	Boro—Water Surface Readings
1924	Boro—Water Surface Readings
1916	Creswell—Levels to Gauge
1916	Creswell—Water Surface Readings

1916	Turkey—Levels to Gauge
1916	Turkey—Water Surface Readings
1916	Lock 3—Levels to Gauge
1916	Lock 3—Water Surface Readings
1925	Section 12—Levels to Gauge
1925	Section 12—Water Surface Readings
1916	Star—Levels to Gauge
1916	Star—Water Surface Readings
1916	Bridge—Levels to Gauge
1916	Bridge—Water Surface Readings
1921	15 G—Levels to Gauge
1921	15 G—Water Surface Readings
1916	Section 15—Levels to Gauge
1921	Section 15—Levels to Gauge
1916	Section 15—Water Surface Readings
1921	Section A—Levels to Gauge
1924	Section A—Levels to Gauge
1916	Section 1U—Levels to Gauge
1921	Section 1U—Levels to Gauge
1921	Section B—Levels to Gauge
1921	Section B—Water Surface Readings
1921	Section 1L—Levels to Gauge
1921	Section 1-L—Water Surface Readings
1913	Section 1—Levels to Gauge
1921	Section 1—Levels to Gauge
1913	Section 1—Water Surface Readings
1924	Range 34—Levels to Gauge
1924	Range 34—Water Surface Readings
1924	Range 20—Levels to Gauge
1924	Range 20—Water Surface Readings
1924	Range 77—Levels to Gauge
1924	Range 77—Water Surface Readings
1924	Range 11—Levels to Gauge
1924	Range 11—Water Surface Readings
1924	Safe Harbor—Levels to Gauge
1913	Safe Harbor—Water Surface Readings



[23639] (page 3)

1924	Safe—Levels to Gauge
1924	Safe—Water Surface Readings
1924	Conestoga—Water Surface Readings
1924	Conestoga Zero—Water Surface Readings
1924	Section 2—Levels to Gauge
1924	Section 3—Levels to Gauge
1924	Wise Island—Water Surface Readings
1924	Wise Island—Water Surface Readings
1925	Conestoga Creek—Water Surface Readings
1914	Witmer's Gauge—Levels to Gauge
1920	Witmer's Gauge—Levels to Gauge
1921	Witmer's Gauge—Water Surface Readings
1913	Section 2—Levels to Gauge
1913	Section 2—Water Surface Readings
1913	Section 3—Levels to Gauge
1913	Section 3—Water Surface Readings
1913	Section 4—Levels to Gauge
1913	Section 4—Water Surface Readings
1924	Section 4½—Water Surface Readings
1913	Section 5—Levels to Gauge
1913	Section 5—Water Surface Readings
1914	York Furnace—Levels to Gauge
1914	York Furnace—Water Surface Readings
1913	Section 6—Levels to Gauge
1913	Section 6—Water Surface Readings
1913	Section 7—Levels to Gauge
1913	Section 7—Water Surface Readings
1913	Sections 8 & 9—Levels to Gauge
1913	Sections 8 & 9—Water Surface Readings
1911	Forebay Gauge—Levels to Gauge
1911	Forebay Gauge—Levels to Gauge
1912	Forebay Gauge—Water Surface Readings
1913	Forebay Gauge—Water Surface Readings
1915	Harrisburg High Water Observations
1913	Gorge, Ice—Pequea and Tucquan

*High Water Observations*

*Note:* This classification refers to data required to check flow, run-off, etc. under varying river and dam crest conditions, and also to data required for defense of lawsuits.

1913	Safe Harbor
1913	Forebay
1913	Holtwood
1914	Safe Harbor
1914	Piney Island
1914	Pequea Creek
1914	Safe Harbor
1914	Pequea Creek
1915	Safe Harbor
1915	Shenk's Ferry
1915	Pequea
1915	Colemanville

[23640] (page 4)

1915	Rock Hill
1915	Tailrace
1915	Harrisburg
1918	Pequea
1918	Shenks Ferry
1916	Conestoga Creek
1919	Pequea
1920	Witmers Mill
1920	Rock Hill
1920	Columbia
1920	Safe Harbor
1921	Section 15G to Section 1
1921	Pequea Creek
1921	Conestoga Creek
1921	Fry Island
1922	Section 15G to Section 1
1922	Pequea Creek

1922	Conestoga Creek
1924	Holtwood to Safe Harbor Traverse
1924	Holtwood, Proposed State Highway at

### *Ice Observations*

*Note:* Refers to collecting data on movement of ice, conditions leading to grounding, etc.

1918	Holtwood to Safe Harbor
1917	Below York Furnace
1917	Holtwood-Columbia
1919-20	Holtwood-Columbia
1920	Holtwood-Columbia
1920	Pequea Creek
1920-21	Holtwood-Columbia
1921	Pequea Creek
1920-21	Conestoga Creek
1921-22	Holtwood-Columbia
1921-22	Pequea Creek
1923-27	Holtwood-Columbia
1922-24	Conestoga Creek
1922-24	Pequea Creek

### *Levels*

1912	Tacquan Creek Weir
1913	Airville Road
1914	Holtwood to Pequea
1914	Holtwood to McCalls
1915	Binkley Property
1915	Vandersloot Property
1915	H. G. Reist Property
1915	Burkholder Property
1915	Tuequan
1915	Bair Property
1921	Section 15G to Section 1
1922	Shenks Ferry Gauge

[23641] (page 5)

- 1923 Telephone Crossing—McCalls Ferry
- 1924 Safe Harbor to Star Rock
- 1924 Safe Harbor to Columbia
- 1924 Railroad, Pequea to Columbia

*McCalls Ferry*

- 1910 Magnetic Variation
- 1913 Property Survey
- 1920 Ferry Landing Topography
- 1921 Ferry Landing Topography
- 1923 Ferry Landing Topography
- 1913 Magnetic Variation—Holtwood

*Monuments*

- 1919 Pequea Creek Property Survey
- 1920 Pequea Creek Property Survey
- 1922 At McCalls Ferry
- 1925 Kauffman Property, Safe Harbor
- 1924 Near Freight Station—Holtwood
- 1915 Otter Creek Survey

*Pequea Creek*

- 1919 Sawmill Tract Survey
- 1919 Topography Vicinity of Railroad Bridge
- 1919 Water Surface Readings
- 1920 Ice Observations
- 1919 Property Surveys
- 1919 Property Surveys
- 1920 Water Surface Readings
- 1921 Water Surface Readings
- 1920 Property Surveys at Pequea
- 1921 Ice Observations
- 1921 Water Surface Readings
- 1921 Railroad Sections
- 1921 Railroad Sections Pequea to Shenks Ferry
- 1922 Topography Sawmill Tract



- 1921-22 Ice Observations
- 1922 Water Surface Readings
- 1922 Trolley along Creek
- 1922-24 Ice Observations
- 1924 New Bench Mark at Pequea
- 1913 Polaris Observations—Safe Harbor Properties
- 1924 Polaris Observations—Safe Harbor Properties

*Property Surveys*

- 1913 Frances Aston
- 1924 Agnes T. Ault
- 1924 Andrew M. Aument
- 1913 W. W. Bones
- 1913 D. E. Binkley
- 1913 W. P. Bolton
- 1913 Joanna Boyd
- 1915 D. E. Binkley
- 1915 Russell Burkholder
- 1915 John Bair

[23642] (page 6)

- 1924 M. M. Breneman
- 1925 Aaron Bleacher
- 1913 Charles Campbell
- 1913 Wm. Cully
- 1916 Cully's Store
- 1921 Jos. C. Cole
- 1921 Colemanville
- 1922 Wm. Cully
- 1923 Geo. Cully
- 1924 Cully's Farm
- 1924 Ray C. Creamer
- 1924 Emmett A. Creamer
- 1925 Emmett A. Creamer
- 1919 Davies, Pequea Creek

1913	T. D. Ellse
1922	Milton Eby
1913	Annie B. Keiser (Phares)
1913	R. T. Fry
1913	Holtwood
1913	P. W. Hiestand
1913	Paul Heine
1913	Christian K. Henry
1914	John W. Hiemenz
1915	Paul Heine
1920	T. A. Halliger (Pequea Creek)
1921	T. A. Halliger (Pequea Creek)
1913	Rosetta Jones
1924	Rosetta Jones
1911	Kelly, McCalls Ferry
1924	D. W. Kendig
1924&25	Reuben Kauffman (Safe Harbor)
1914	Jos. E. Lant
1919	Lancaster & York Furnace Street Railway
1922	Lancaster & York Furnace Street Railway
1925	Little Conestoga Creek
1913	D. Mulligan (Safe Harbor)
1913	Match Factory (Safe Harbor)
1913	McCalls Ferry
1916	Meyers Store
1921	Martic Forge
1923	Martic Forge
1924	Washington Martin
1925	Isaac Miller
1915	Otter Creek
1913	Pennsylvania Railroad Company (Safe Harbor)
1919	Pequea Creek
1920	Pequea Creek
1924	O. C. Patton Topography
1913	C. F. Quade
1921	C. F. Quade

1922	C. F. Quade
1924	C. F. Quade
1913	Sabina Roadaker
1914	H. G. Reist
1915	H. G. Reist

[23643] (page 7)

1924	Newton Rineer
1913	H. M. Stauffer & Co.
1913	E. Shober
1913	H. M. Stauffer
1913	Esther Seiple
1913	Samuel Shank
1914	John Stokes
1917	W. L. Straus
1919	Shoff (Pequea Creek)
1919	Sawmill Tract (Colemanville Water & Power Co.)
1921	John Stokes
1922	Sawmill Tract
1922	Shenks Ferry
1923	Shenks Ferry
1915	Tucquan Creek
1921	Urey Farm
1915	J. E. Vandersloot
1916	J. E. Vandersloot
1913	Elizabeth Walk
1913	George Warfel
1913	D. M. Witmer
1913	York Furnace Farm
1921	York Furnace Farm

*Roads*

1912	Levels Road at Holtwood
1912	Levels Road in York County
1913	Levels Road at Airville
1916	Location Road York County

1915	Proposed Road at Otter Creek
1917	Road—McCalls Ferry to Hospital
1922	Survey Road—Safe Harbor
1925	Road—Kauffman Property
1925	Proposed Road at Safe Harbor
1924	Proposed State Road at Holtwood
1924	Levels Road at Holtwood

*Rock Hill*

1915	High Water Observations
1920	High Water Observations
1916	Bench Marks
1916	Levels from Safe Harbor

*Safe Harbor*

1913	High Water Observations
1913	Water Surface Readings
1913	Property Surveys
1914	High Water Observations
1914	Topography at Conestoga Creek
1914	Topography at Safe Harbor

[23644] (page 8)

1915	High Water Observations
1920	High Water Observations
1921	Road Survey
1925	Road Survey
1924	Bench Marks
1924	Traverse and Levels to Holtwood

*Survey*

1911	Topographic Survey of Holtwood
1913	Wrightsville Canal Survey
1913	Tucquan Creek Topography
1913	McCall Ferry Survey
1914	Topographic Survey of Holtwood
1915	Otter Creek Survey
1915	Tucquan Creek



1919	Pequea Creek
1919	Pequea Creek
1919	Pequea Creek
1921	Safe Harbor Road Survey
1924	Cully Farm Survey
1923	C-5 Topographic Survey

*Tucquan Creek*

1912	Levels for Weir
1913	High Water
1913	Topographic Survey
1913	Weir Observations
1914	Soundings
1915	185 Contour Levels
1915	Topographic Survey
1922	Weir Observations
1922	Weir Observations

[23645]

## SCHEDULE "B"

## List of Drawings Made Between 1911 and 1925 in Connection with River Observations, Backwater Data and Property Surveys.

100-A-2154	Mar. 1911	Map of McCall Ferry and Holtwood Showing Roads
100-A-2173	Mar. 1912	Topographic Map of Holtwood, Penna.
100-A-2174	Mar. 1913	Water and Sewer Line Map of Holtwood, Pa.
100-A-2210	Oct. 1912	Topographic Map Below York County Abutment
260-A-2222	Sept. 1912	Tail Water Curve
260-A-2227	Oct. 1912	Tail Water Curve, Holtwood, Pa.
220-A-2234		Topography of North End of Fry Island
260-A-2240	Nov. 1912	Tailwater Curve, Holtwood, Pa.
260-A-2241	Nov. 1912	Tailwater Curve, Holtwood, Pa.
260-A-2242	Nov. 1912	Tailwater Curve, Holtwood, Pa.
100-A-2243	Nov. 1912	Topography along York Co. Shore from Dam to Baltimore Transmission Line
100-A-2261	Sept. 1913	Map and Profile of Susquehanna River, Columbia to Perryville
230-A-2272	Oct. 1912	Topography of Forebay
260-A-2303	Jan. 1913	Location of Cully Gauge
260-A-2322	Apr. 1913	Key Map of Tailrace Sections Showing Gauge Locations
100-A-2324	May 1913	Detail Topography Below York Co. Abutment
100-A-2326	June 1913	Detail Topography Below York Co. Abutment
101-A-2327		General Plan of the Susquehanna Canal—Wrightsville
100-A-2332	Aug. 1913	Tucquan Creek

230-A-2353	Nov. 1913	Topography of Forebay—Fall of 1913
110-A-2355	Jan. 1914	Property at McCalls Ferry, Pa.
230-A-2356	Nov. 1913	Topography—Forebay
110-A-2357	Jan. 1914	Property Acquired by P. W. & P. Co. at Safe Harbor, Pa.
310-A-2359	Sept. 1914	Profile Tucquan Creek
110-A-2360	Mar. 1914	Property Index Map #4-A—Safe Harbor
111-A-2393	Apr. 1914	Cross Sections Along C. & P. D. R. R. Holtwood & Pequea
230-A-2401	Aug. 1914	Topography of Forebay—1914
230-A-2402	Aug. 1914	Topography of Forebay—1914
110-A-2876	June 1915	Topographic Survey York Furnace & Urey Farms
110-A-2893	June 1915	Survey of York Furnace and Urey Farms
110-A-2894	June 1915	Property Released to P. W. & P. Co. by H. G. Reist
310-A-2897	1911	Cross Sections of Susq. River for Backwater Calculations, Sections #3 to #10
310-A-2898	1911	Ditto , Creswell #14
310-A-2899	1911	Ditto , Bridge—#2
310-A-2900	July 1915	River Sect. Safe Harbor to Holtwood, Soundings made Feb. 1913
310-A-2901	July 1915	Current Meter Readings Shenks Ferry to Holtwood, Feb. 1913
310-A-2903	Aug. 1915	Kutter's Diagram
100-A-2904	1911	Diagram for Interpolation of Contours
100-A-2908	Aug. 1915	Proposed Location for Bridge & Road at Otter Creek
100-A-2909	Aug. 1915	Sections for Proposed Road at Otter Creek, Pa.
100-A-2910	Aug. 1915	Sections AB for Proposed Bridge over Otter Creek, Pa.
100-A-2911	Aug. 1915	Sections for Proposed Road & Bridge at Otter Creek, Pa.

[23646] (page 2)

110-A-2914	Sept. 1915	Topographic Map of Portion of J. E. Vandersloot Property in L. Chanceford Twp., York Co., Pa.
310-A-2919	Apr.- May 1916	Computed and Observed Backwater Profiles Above Holtwood Dam, Holtwood to Columbia
110-A-3018	July 1917	Index of Title of Vandersloot's Property
110-A-3019	July- Aug. 1917	Properties in the Vicinity of J. E. Vandersloot
110-A-3020	July- Aug. 1917	Map Showing Discrepancy in Descriptions of Property in Vicinity of Vandersloot's
111-A-3024	May 1919	Profile of Lancaster & York Furnace St. Railway From Pequea to Colemanville
110-A-3029	Nov. 1919	Proposed Location of National Transit Company's Pipe Line, York Furnace, Pa.
110-A-3180	Feb. 1919	Alignment Lanc. & York Furnace St. Railway—Colemanville to Pequea
310-A-3228	July 1920	Current Meter Readings at Forebay Entrance—July 14 to 20, 1920
100-A-3284	Aug. 1920	Plan & Profile for Rd. Reloca.—Vicinity of Holtwood
100-A-3285		ditto
100-A-3286		ditto
100-A-3287		ditto
100-A-3288		ditto
100-A-3289		ditto
100-A-3290		ditto



		Cross Sections of Road Vicinity of Holtwood
100-A-3291		
100-A-3292		ditto
100-A-3293		ditto
100-A-3294		ditto
100-A-3295		ditto
100-A-3296		ditto
100-A-3297		ditto
100-A-3298		ditto
100-A-3299		ditto
100-A-3300		ditto
100-A-3301		ditto
100-A-3302		ditto
100-A-3303		ditto
100-A-3304		ditto
100-A-3305		ditto
100-A-3306		ditto
100-A-3307		ditto
100-A-3308	Aug. 1920	ditto
100-A-3309	Aug. 1920	ditto
310-A-3329	Feb. 1922	Record of Floods since 1889, Part I
310-A-3330	Feb. 1922	Record of Floods since 1889, Part II
100-A-3368	Dec. 1921	Topography of Shenks Ferry Coal Storage Site
100-A-3376	Jan. 1922	Topography of Quade Property at McCalls Ferry
110-A-3384	Mar. 1922	Property Lines Vicinity McCalls Ferry
111-A-3385	Mar. 1922	Survey Vicinity of McCalls Ferry, Showing Location of Buildings, Railroad, Right of Way, etc.
100-A-3386	Apr. 1922	Topography in Vicinity of Old Mixer Plant
100/110-A-3387	July 1922	Topography at mouth of Pequea Creek
100-A-3389	Nov. 1922	Susquehanna River Holtwood to Shenks Ferry No. 1

- 100-A-3390 Dec. 1922 Susquehanna River Holtwood to Shenks Ferry No. 2
- 100-A-3391 Nov. 1922 Susquehanna River Holtwood to Shenks Ferry No. 3

[23647] (page 3)

- 100-A-3392 Dec. 1922 Cross Section Coal Storage Area Shenks Ferry
- 100-A-3394 Nov. 1923 Plan of Shenks Ferry Showing Topography of R. R. Right of Way
- 100-A-3405 June 1922 Road System Between Holtwood, Quarryville and Lancaster
- 100-A-3446 June 1923 Cross Sections Between Railroad and Tailrace in Vicinity of Mixer Plant
- 110-A-3457 Apr. 1923 Property of Geo. G. Cully—Holtwood, Pa.
- 100-A-3460 May 1924 Topography of O. C. Patton Farm—Portion
- 100-A-3461 May 1924 ditto
- 100-A-3462 May 1924 ditto
- 100-A-3463 June 1924 Cross Sections Proposed Road Vicinity of Holtwood
- 100-A-3464 June 1924 ditto
- 100-A-3465 June 1924 ditto
- 100-A-3466 June 1924 Plan & Profile Proposed Road Vicinity of Holtwood
- 100-A-3467 June 1924 ditto
- 100-A-3468 June 1924 Topography of Portion of Geo. G. Cully Farm
- 110-A-3469 Dec. 1925 Bleacher, Creamer, & Miller Properties, Nr. Highville, Pa.
- 100-A-3470 June 1924 Topography Plant Dist.—Vicinity of Club House
- 100-A-3478 Oct. 1925 Coordinate Map of Survey Sta. Vicinity of Holtwood
- 110-A-3481 June 1926 Relocation of Safe Harbor Road

100-A-2942	Feb. 1916	Topography Susquehanna River— Lockport to Turkey Hill
100-A-2960		Drainage Area of the Susq. River above McCall's Ferry
100-A-3000	May 1916	Topographical Map <sup>2</sup> —Holtwood Power Development
110-A-3014	Nov. 1914	Property to be Acquired from J. E. Vandersloot on Lower Chanceford Twp., York Co., Pa.
310-A-3025	July 1919	Water Surface Profile Pequea Creek, Pequea to Colemanville
100-A-3026	July 1914	Plan Susquehanna River Holtwood to Safe Harbor
110-A-3027	Jan. 1920	Properties Bordering Along Pequea Creek from the Susquehanna River to Martie Forge in Martie and Con- estoga Twps., Lancaster Co., Pa.
110-A-3028	Nov. 1919	Map Showing Property Vicinity Pequea
100-A-3265	Nov. 1920	Proposed Bridge and Road—Otter Creek
110-A-3458	May 1923	Pequea Creek Property
110-A-3459	May 1923	ditto
100-B-4258	July 1910	Map of McCall's Ferry & Minqua, Showing Railroad Station
100-B-4334	Apr. 1911	Location of Main Road, Holtwood, Pa.
310-B-4531	Nov. 1913	Backwater Curves above Holtwood Dam
110-B-4532	Jan. 1914	Original Property Layout at Safe Har- bor
110-B-4533	Feb. 1914	Property at Safe Harbor (A. Tripple)
100-B-4534	Jan. 1914	Cross Sections of Embankment, Cones- toga Traction Co., Pequea Creek
100-B-4536	May 1913	ditto
110-B-4620	1913	Prop. Index Map No. 1 Vic. Wrights- ville & Washington Boro

110-B-4621		Prop. Index Map No. 2 Vic. Turkey Hill
110-B-4622		Prop. Index Map No. 3 Vic. Walnut Is. & Goose Is.
110-B-4623		Prop. Index Map No. 4 Vic. Conestoga Creek & Safe Harbor
110-B-4624		Prop. Index Map No. 5 Vic. Pequea Creek & Shenks Ferry
110-B-4625		Prop. Index Map No. 6 Vic. Tucquan & McCalls Ferry
110-B-4626		Prop. Index Map No. 7 Vic. Holtwood & Muddy Creek
310-B-4627	1913	Conestoga Creek Sections for Backwater Calculations
310-B-4628	1911	Conestoga Creek Profile Susq. River to Rock Hill Dam
310-B-4629		Discharge Curve of Dam at Holtwood
310-B-4632	July 1912	Profile of Tucquan Creek
310-B-4633	1911	Profile of Susquehanna River—Holtwood to Sauers Ferry
310-B-4635	1912	Sheet #1, Section 1-10 Susquehanna River
310-B-4636	1912	Sheet #2, Section 11-15 Susquehanna River
310-B-4637	1912	Sheet #3, Section 15G to Creswell, Susquehanna River
		[23648] (page 4)
310-B-4638	1912	Sections of Susquehanna River at Columbia
310-B-4639	1911	Backwater Calculations Conestoga Creek—Sections for Perimeter
310-B-4644	1911	Observed and Computed Profile of Water Surface of Conestoga Creek
310-B-4645	1911	Profile of Conestoga Creek Showing Backwater Calculations of 1911 and Observations of Oct. 1910



100-C-5034	Apr. 1910	Map of Pequea Creek and Highway Bridge
310-C-5068	Aug. 1910	Rating Curve of Susquehanna River at Harrisburg
310-C-5069	Aug. 1910	Rating Curve of Susquehanna River Cable Section (Before Dam)
310-C-5079	Sept. 1910	Half monthly Minimum Flow of Susq. River during 1891-1910
310-C-5098	Dec. 1910	Harrisburg Discharge Curve
310-C-5127	Feb. 1911	Pondage Above McCall Ferry Dam
111-C-5132	Mar. 1911	Penna. R. R. Right of Way at Holtwood, Pa.
100-C-5141	May 1911	Map Showing Contour Lines above Railroad Track at Holtwood
257-C-5226	Apr. 1913	Kay Map of Flood Observations
257-C-5230	Apr. 1913	Location of Gauging Sta. Susq. Water Shed Flood of 3/29/13
110-C-5265	May 1913	Map Showing Culleys & Dougherty Property at Holtwood
110-C-5280	Jan. 1914	Hudson Est., Safe Harbor, Conestoga Twp., Lanc. Co., Pa.
110-C-5281	Jan. 1914	Daniel Witmer Property, Safe Harbor, Manor Twp., Lanc. Co., Pa.
110-C-5282	Jan. 1914	Saml. Shank Property, Safe Harbor, Manor Twp., Lanc. Co., Pa.
110-C-5283	Jan. 1914	Milton Eby Property #1, Safe Harbor, Conestoga Twp., Pa.
110-C-5284	Jan. 1914	Safe Harbor Properties, Conestoga Twp., Lanc. Co., Pa.
110-C-5285	Feb. 1914	Shober Est., Conestoga Twp., Lanc. Co., Pa.
111-C-5286	Mar. 1914	Profile Along W. Rail Main Track, C&PD.RR. Holtwood to Pequea
110-C-5287	Mar. 1914	Paul Heine Property, Manor Twp., Lanc. Co., Pa.

257-C-5288	May 1914	Key Map of Pequea Creek
310-C-5297	Mar. 1915	Relative Gauge Heights at Holtwood & Safe Harbor
110-C-5298	Mar. 1915	Land Map McCall Ferry Power Co. Vicinity Pequea
110-C-5299		Land Map McCall Ferry Power Co. Vicinity McCall Ferry
110-C-5300	May 1915	Bell Property at Pequea now owned by Paul Heine
110-C-5305	May 1912	School House Front York Furnace Farm
110-C-5332	Apr. 1912	Tucquan Club Property on York Fur- nace Farm
110-C-5333	May 1912	Map of Southerly End of York Fur- nace Farm
110-C-5334	May 1912	Map of Southerly End of York Fur- nace Farm
110-C-5344	May 1912	School House Front York Furnace Farm
310-C-5345	June 1915	Road from Pequea Creek to Coleman- ville—Peq. Cr. Backwater
310-C-5346	1912	Backwater, Pequea Creek
310-C-5347	June 1915	Lancaster & York Furnace Elec. R. R. Pequea to Colemanville, Pequea Creek Backwater
310-C-5348	June 1915	Gauge Readings, Harrisburg to Holt- wood
100-C-5352		Map of Conestoga Twp., Lanc. Co., Pa.
100-C-5353		Map of Lancaster Twp., Lanc. Co., Pa.
100-C-5354		Map of Martic Twp., Lanc. Co., Pa.
310-C-5355		Curves for Backwater Calculations Conestoga Creek
310-C-5356		Sections for Backwater Calculations Conestoga Creek
310-C-5357		Sections for Backwater Calculations Conestoga Creek

3938

Exhibit No. 237

- 110-C-5364 Russell Burkholder Prop. Released to  
P. W. & P. Co.
- 110-C-5366 Aug. 1915 Property at Tucquan Creek East of  
P. R. R. Right of Way
- 310-C-5368 Study of Flood Waves—Susq. River—  
Harrisburg to Holtwood
- 310-C-5369 Apr. 1911 Comparative Gauge Heights at Har-  
risburg—Columbia to Holtwood
- 310-C-5370 1911 Susquehanna River. Comparison  
Water Surface Reading of 1910-11-  
Flood of 1889-1904 Holtwood to Co-  
lumbia Gauge

[23649] (page 5)

- 100-C-5371 Sept. 1915 Proposed Bridge at Muddy Creek
- 310-C-5373 Oct. 1915 Rating Curve for Buff and Buff Cur.  
Meter No. 8161
- 310-C-5374 Oct. 1915 Rating Curve for Buff and Buff Cur.  
Meter No. 8161
- 310-C-5378 May 1916 Rating Surves River Sections—Colum-  
bia to Holtwood
- 110-C-5379 May 1916 Property at Tucquan Creek Enclosing  
185 ft. Contour East of R. R. Right  
of Way
- 100-C-5389 Proposed Relocation of County Rd. in L.  
Chanceford Twp.
- 310-C-5404 Feb. 1916 Cross Sections of Pequea Creek for  
Backwater Calculations
- 310-C-5405 Cross Sections for Perimeters—  
Pequea Creek 1912
- 310-C-5406 Cross Sections of Pequea Creek for  
Backwater Calculations
- 310-C-5407 Pequea Creek—Radius and Curves
- 310-C-5425 Aug. 1916 Profile of Conestoga Creek Showing  
Backwater Computation with  
Flashboards on Dam

310-C-5461	Apr. 1917	Profile of Pequea Creek Showing Computed Backwater with Elev. 180-C at Mouth
310-C-5523	Sept. 1917	Location of Gauging Stations Susq. River Water Shed
310-C-5524	Aug. 1918	Key Map for Backwater Readings—Pequea Creek
310-C-5530	May 1919	Cross Sections Pequea Creek—1919
310-C-5531	May 1919	Cross Sections Mouth of Pequea Creek 1919
110-C-5533	Aug. 1917	Vicinity Vandersloot's Property from McCalls Ferry Power Co. Property Drawings
110-C-5606	June 1919	Pequea Creek Property Survey of 1919
310-C-5607	July 1919	Comparative Gauge Heights Pequea Creek & Forebay, 6/26/19
110-C-5613	Feb. 1920	Topography of Tamer Ann Halliger Tract, Lancaster Co., Pa.
310-C-5615	May 1920	Development of Freshet in Conestoga Creek, March 1920
100-C-5632	July 1920	Topography of C&PD R. R. Co. R. W. Showing Portion of Forebay
310-C-5637	Sept. 1920	Profile Road Safe Harbor to Rock Hill, Conestoga Side
310-C-5665	Dec. 1920	Discharge Curves Susquehanna River, Harrisburg & Holtwood 1920
310-C-5666	Nov. 1921	Rating Curves Section 15G-1
310-C-5667	Dec. 1921	Discharge Curves for Holtwood Dam with Flashboards Remaining on Pipe Bent to Crest
310-C-5668	Mar. 1922	Holtwood and Harrisburg Rating Curves 1921
310-C-5670	Apr. 1922	Forebay & Tailrace Relation Curve with 8 Units Wide Open
100-C-5681	Apr. 1921	Profile of Road in L. Chanceford Twp., Vic. of Otter Creek



310-C-5715	Mar. 1923	Rating Curves
100-C-5716	May 1923	Topography of Susquehanna River Vi- cinity Shenks Ferry
310-D-6023		Rating Curves for Susquehanna River at Pequea
310-D-6054	Aug. 1910	Rating Curves for Susquehanna River at Safe Harbor
100-D-6073	Nov. 1910	Location of Existing and Submerged Roads in York Co.
100-D-6148		Profile of Roads McCalls Ferry, York Co.
310-D-6208	Apr. 1913	Flood Observations Susq. River— Creswell to Fites Eddy
110-D-6221	Feb. 1914	Heistand & Binkley Properties, Safe Harbor
110-D-6222	Nov. 1913	Key Map of Backwater Observations, Shore Dam
110-D-6223	Feb. 1914	Safe Harbor Properties
110-D-6224	Feb. 1914	Milton Eby Property #2 & #3, Safe Harbor
110-D-6225	Feb. 1914	Milton Eby Property #4, Safe Harbor
110-D-6226	Feb. 1914	Safe Harbor Properties, Safe Harbor
110-D-6227	Mar. 1914	Properties at Safe Harbor, Conestoga Twp., Lanc. Co., Pa.
110-D-6228	June 1914	Flood Observations Susq. River, Sec- tion #1 to Fites Eddy
310-D-6280	Feb. 1922	Plan of Susq. River Between Holtwood and Marietta for River Observa- tions
310-D-6295		Ditto
[23650] (page 6)		
110-E-8511	Jan. 1922	Profile of Public Rd. at McCalls Ferry —Quade Property
110-E-8517	Sept. 1923	Plat of Portion of Cully Tract
110-E-8538	Jan. 1922	Plat of D. Rowinski Tracts

310-E-7011	Apr. 1910	Rating Curves, Cullys Falls, Harrisburg & Dam, 4/27/10
110-E-7036	June 1910	Property Belonging to Heirs of John Bair
100-E-7012	Apr. 1910	Pequea Highway Bridge
110-E-7784	Oct. 1913	Property Survey Portion York Furnace Farm
110-E-7785	Jan. 1914	Properties at Safe Harbor, Manor Twp., Lanc. Co., Pa.
110-E-7786	Jan. 1914	Anderson Property, Safe Harbor, Conestoga Twp., Lanc. Co., Pa.
110-E-7895	July 1915	Russell Burkholder Property, York Co., Pa.
100-E-8008	June 1916	Index to Fisheries below Dam (Holtwood)
100-E-8009	June 1916	Index to Fisheries above Dam (Holtwood)
110/310-E-8305	Nov. 1920	Cross Section & Profile of Pequea Creek through Halliger Tract
110-E-8430	Dec. 1920	Plat of Davis Property at Safe Harbor
110-E-8507	Sept. 1921	Map of Colemanville Showing Property Lines

## EXHIBIT No. 238.

[23651]

March 29, 1945

## MEMORANDUM

*Re: Lancaster Office Expense*

After the Holtwood Development had been in operation for about one year a decision was made to increase the operating elevation of the pond during low flows by the use of flashboards although it was known that flowage basin property and property rights were inadequate for the higher backwater. Thus, additional property purchases were required at various locations, particularly, however, along Conestoga Creek and at other points on the Lancaster County side of the river. At the time, the staff of the Company was very small and it became necessary to hire someone who could devote full time to the work; therefore, Mr. Marvin E. Bushong, a native of Lancaster County, was employed in 1912 for this purpose. Mr. Bushong was familiar with local conditions, had a wide acquaintanceship, and the benefit of experience gained from the purchase of right of way for the 25 cycle transmission line between Holtwood and Lancaster built by Lancaster Edison Company—now merged with Pennsylvania Power & Light Company.

The work of acquiring a large number of properties in fee, or flowage rights, necessarily involved much patient and inconspicuous preparatory laying of groundwork, frequent contacts with attorneys representing the Company or the property owners, and frequent references to land records, so that it was natural to select Lancaster, the county seat, as a location for Mr. Bushong's office. At that time telephone service and highways were considerably better in the vicinity of Lancaster than in the vicinity of Holtwood, so that the work could be carried on more efficiently from the former location. Furthermore, by having the

office in Lancaster, Mr. Bushong was in a position to settle or prevent expensive suits brought or threatened to be brought against the Company for alleged flooding, ice damage, etc., and to gather information, consult witnesses, and otherwise conduct negotiations with the property owners when they visited Lancaster to sell produce in the markets or to make purchases, and such contacts were obviously without the disadvantage of the public knowledge that would have resulted from meetings at Holtwood.

The main function of the Lancaster Office when established, and for many years thereafter, was to acquire property required for and permanently useful to the Holtwood Development. Therefore, all expenses of the office, until 1926, were treated as we would today treat the expense of any field office set up in connection with any other construction job. Beginning in 1912, several owners of riparian property located in the Holtwood basin filed suits in an attempt to prevent the use of flashboards on the Holtwood dam, and this led to long drawn-out negotiations, resulting ultimately in purchase of the properties. Between 1912 and 1926 Mr. Bushong acquired a total of 67 properties, and the use of flashboards on the dam during low flow periods was continuous except during the [23652] (page 2) years 1915 and 1916. In addition to these purchases, however, Mr. Bushong carried on studies, investigations, and negotiations for such matters as the relocation of certain roads and bridges affected by backwater, the construction of fishways in the Holtwood dam, the relocation and improvement of the public road near Holtwood, and made preliminary studies and supervised work in connection with right of way purchases for the Holtwood-York, Holtwood-Coatesville, and Holtwood-Lancaster 60 cycle lines.

In carrying out work assigned to the Lancaster Office, Mr. Bushong from time to time hired capable men available in Lancaster or vicinity, who were not identified with



the Company. These men, both professional and non-professional, were useful in keeping contacts which enabled them to learn when deaths or changes in financial condition, or other factors, affected market conditions for specific properties and in making investigations, examining titles, negotiating for property or property rights, or in other phases of property acquisition work where direct action by the Company would have increased costs or had the effect of making amicable settlements extremely difficult, if not impossible. Because of Mr. Bushong's close contact with local conditions, his recommendations as to employment were usually approved and he was authorized to make employment contracts on a per diem or weekly basis, or a fee basis for the professional men, mainly attorneys, although none of them were considered regular employees. The services performed by these men cannot be set forth in detail as their sole contact with the Company was through Mr. Bushong, who assumed all responsibility for their employment and supervision. In some cases we can trace our present land titles through these agents, but in other cases the name of the agent or attorney does not appear in our records except in connection with the payment of the salary, fee, or expenses.

The work carried on in the Lancaster Office at times called for engineering information, which was supplied to Mr. Bushong by our forces at Holtwood or Baltimore. For many years it has been our policy to survey and permanently mark the boundaries of properties purchased by the Company, and to make maps and other permanent records. Therefore, the operations of the Lancaster Office necessitated field and office engineering work which some times preceded and sometimes followed the actual purchase of property or flowage rights. Thus, charges to the Flowage Basin Account for engineering work were not usually made at the same time, or even in the same year as other charges for the same property or properties.

After the completion of the hydro plant extension, the construction of the York, Coatesville, and Lancaster lines, and the steam plant it was recognized that the function of the Lancaster Office would change, in that it would no longer serve solely as a field construction office. The office was continued as a general office, and a fixed percentage of the expense was charged to operation, beginning in January, 1926. This breakdown between construction and operation continued until January, 1930 when Safe Harbor land purchases required major attention and all charges to P. W. & P. Co. construction costs were discontinued except for charges directly connected with the purchase [23653] (page 3) of right of way for the Safe Harbor Transmission System. Since the completion of the Safe Harbor-Westport transmission line and the purchase of right of way for the Safe Harbor-Riverside line, all expenses of the Lancaster Office allocated to Pennsylvania Water & Power Company have been charged as an operating expense.

April 5, 1945

3946

Real Estate Purchases Made by  
Lancaster Office (M. E. Bushong) 1912 to 1925, incl.  
Information taken from vouchers and deeds.  
1912

Exhibit No. 238

Month	Prop. No.	Name	Option Purchased	Deed Acquired	Other Interest Acquired
Apr.	E-91	Frances Aston	\$ 5.	\$ .	\$ .
"	E-59	A. J. Zercher	10.		
"	E-107	Harriet Dabler	10.		
May	E-83&89	Samuel Shank	50.		
"	E-99	Elizabeth Walk	10.		
"	E-88	Joanna Boyd	25.		
"	E-101	Benj. E. Kendig	50.		
"	E-81	W. W. Bones	50.		
"	E-86 A&B	David E. Binkley	50.		
"	E-87	B. F. Campbell	50.		
"	( E-56&1/2int. in	E. Shober Estate	100.		
"	( E-111				
June	( E-109	Paul Heine (Grebe)	100.		
"	( E-110				

Exhibit No. 238

3947

Month	Prop. No.	Name	Option Purchased	Deed Acquired	Other Interest Acquired
June	E-96	Scott Derridinger	50.		
"	E-60	Franklin Frey	50.		
"	E-104	Annie B. Keiser	100.		
"	E-105	Sabina K. Roadaker	130.		
"	E-108	Mary A. Johnson	50.		
"	E-103	Rosetta Jones	50.		
"	E-106	T. D. Ellse	50.		
"	E-94	Sallie Kendig	50.		
July	E-90	C. K. Henry	150.		
"	E-95	Elizabeth Slough's Heirs	10.		
"	E-98	Mary Fralick	10.		
Aug.	E-61	Caroline Hudson Estate	100.		
"	E-62	Wm. Anderson		725.	
"	( E-109	Paul Heine (Grebe)		4,000.	
"	( E-110				
Oct.	E-95	Elizabeth Slough's Heirs (5 interests)	50.		

Month	Prop. No.	Name	Option Purchased	Deed Acquired	Other Interest Acquired
Dec.	E-90	Christian K. Henry		2,850.	
"	E-94	Sallie Kendig		1,700.	
"	E-101	Benj. E. Kendig		750.	
"	E-106	T. D. Ellse		1,950.	
"	E-105	Sabina K. Roadaker		1,170.	
"	E-63, A,B,C,D	Wm. A. Anderson		6,400.	
[23655] (page 2)					

1913

Jan.	E-57, 58, & ½ int. in E-111	H. M. Stauffer & Co.	\$ 500.	\$	\$
"	E-80	D. M. Witmer	500.		
"	E-108	Mary A. Johnson		550.	
"	E-61	Caroline A. Hudson			
		Estate		5,400.	
"	E-64	Benj. Davis—Acquired			
		Geo. Snyder			
		Mortgage			1,200.
"	E-104	Annie B. Keiser		1,900.	
"	E-83 & 89	Samuel Shank		5,050.	

Month	Prop. No.	Name	Option Purchased	Deed Acquired	Other Interest Acquired
Jan.	E-56 & ½ int. in E-111	E. Shober Estate		5,400.	
Mar.	E-59	A. J. Zercher		1,490.	
"	E-95	Elizabeth Slough's Heirs		230.	
"	E-91	Frances Aston		645.	
"	E-96	Scott Derridinger		1,950.	
"	E-60	Franklin H. Frey		1,450.	
"	E-88	Joanna Boyd		1,490.	
"	E-84	P. W. Heistand		2,500.	
"	E-81	W. W. Bones		1,350.	
"	E-99	Elizabeth Walk		390.	
"	E-86 A&B	David E. Binkley		2,450.	
"	E-87	B. F. Campbell		2,750.	
"	E-80	D. M. Witmer		11,250.	
"	E-57, 58, & ½ int. in E-111	H. M. Stauffer & Co.		19,500.	
Apr.	E-92	H. B. Rhoads Estate		2,228.23	
May	E-93	Esther Seiple (Now Worker)	50.		



Month	Prop. No.	Name	Option Purchased	Deed Acquired	Other Interest Acquired
May	E-103	Rosetta Jones		450.	
June	E-107	Harriet Dabler		940.	
"	E-93	Esther Seiple (Now Worker)		2,750.	
Sept.	E-64	Benj. Davis-Payment to Jos. Kenworthy, Tr.			1,000.
Dec.	E-98	Mary Fralick		390.	
"	E-100	Penna. R. R. Co. 1914		855.42	
Apr.	E-48 A&B	Mary E. Harnish	1.		
May	"	" " "		200.	
"	W-15	Russell Burkholder	50.		
June	W-32 & 33	Daniel J. Rowinsky		50.	
"	W-15	Russell Burkholder		1,225.	
July	W-31	Franklin Kline	100.		
Aug.	"	" "		1,000.	

Month	Prop. No.	Name	Option Purchased	Deed Acquired	Other Interest Acquired
		[23656] (page 3) 1915			
Mar.	W-28	John W. Hiemenz	\$	\$ 8,000.	\$
"	E-10A	Robert T. Fry		1,500.	
Apr.	W-14	Henry G. Reist		1,500.	
June	W-20	John Bair Estate			
"	R-20	Fishing Island or Ful- ton Rock Otter Island (unlo- cated)		6,200.	
		Geo. Urey Patent Is. or Grassy Is. (unlo- cated)			
"	W-30	Minnehaha Club		100.	
July	W-18	Hugh Ross, et al 1916		850.	
Mar.	E-19	Woelpper		30,000.	
"	E-19	Woelpper (Mortgage)			5,299.16